

A3
PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/762,243

DATE: 09/05/2001

TIME: 13:13:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\09052001\I762243.raw

ENTERED

3 <110> APPLICANT: Kapulnik, Yoram
 4 Ginzberg, Idit
 6 <120> TITLE OF INVENTION: METHOD FOR SELECTIVE AND OPTIONALLY REVERSIBLE DEGENERATION
 OF SOMATIC

7 PLANT TISSUE

9 <130> FILE REFERENCE: 01/21632

11 <140> CURRENT APPLICATION NUMBER: US 09/762,243

12 <141> CURRENT FILING DATE: 1999-07-30

14 <160> NUMBER OF SEQ ID NOS: 24

16 <170> SOFTWARE: PatentIn version 3.1

18 <210> SEQ ID NO: 1

19 <211> LENGTH: 563

20 <212> TYPE: DNA

21 <213> ORGANISM: Artificial sequence ✓

23 <220> FEATURE:

24 <223> OTHER INFORMATION: 'sps'-streptavidin artificial gene ✓

26 <400> SEQUENCE: 1

27 actgcagtta tgcgcaagat cgctcgttgca gccatcgccg ttccctgac caccgtctcg 60
 29 attacggcca gcgcttcggc agaccctcc aaggactcga aggccaggt ctcgcccgcc 120
 31 gaggccggca tcaccggcac ctggtacaac cagctcggtc cgacctcat cgtgaccgcg 180
 33 ggcgcgacg gcgcctgac cggaacctac gagtcggccg tcggcaacgc cgagagccgc 240
 35 tacgtcctga ccggtcgtta cgacagcgcc ccggccaccg acggcagcgg caccgccctc 300
 37 ggttgagcgg tggcctggaa gaataactac cgcaacgccc actccgcgac cactgtggagc 360
 39 ggccagtacg tcggcgggcg cgagggcagg atcaacaccc agtggctgct gacctccggc 420
 41 accaccgagg ccaacgcctg gaagtccacg ctggtcggcc acgacacctt caccaagggtg 480
 43 aagccgtccg ccgcctccat cgacgcggcg aagaaggccg gcgtcaacaa cggcaaccgc 540
 45 ctgcagcccg ttcagcagta gtc 563

48 <210> SEQ ID NO: 2

49 <211> LENGTH: 186

50 <212> TYPE: PRT

51 <213> ORGANISM: Artificial sequence ✓

53 <220> FEATURE:

54 <223> OTHER INFORMATION: 'sps'-streptavidin artificial gene product ✓

56 <400> SEQUENCE: 2

58 Thr Ala Val Met Arg Lys Ile Val Val Ala Ala Ile Ala Val Ser Leu
 59 1 5 10 15
 62 Thr Thr Val Ser Ile Thr Ala Ser Ala Ser Ala Asp Pro Ser Lys Asp
 63 20 25 30
 66 Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly Thr Trp
 67 35 40 45
 70 Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala Asp Gly
 71 50 55 60
 74 Ala Leu Thr Gly Thr Tyr Glu Ser Ala Val Gly Asn Ala Glu Ser Arg
 75 65 70 75 80
 78 Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro Ala Thr Asp Gly Ser
 79 85 90 95
 82 Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys Asn Asn Tyr Arg Asn
 83 100 105 110

ENTERED

ENTERED

RAW SEQUENCE LISTING

DATE: 09/05/2001

PATENT APPLICATION: US/09/762,243

TIME: 13:13:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\09052001\I762243.raw

```

86 Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr Val Gly Gly Ala Glu
87      115      120      125
90 Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser Gly Thr Thr Glu Ala
91      130      135      140
94 Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp Thr Phe Thr Lys Val
95 145      150      155      160
98 Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys Lys Ala Gly Val Asn
99      165      170      175
102 Asn Gly Asn Pro Leu Asp Ala Val Gln Gln
103      180      185
106 <210> SEQ ID NO: 3
107 <211> LENGTH: 564
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: 'mst'-streptavidin artificial gene ✓
114 <400> SEQUENCE: 3
115 gtaaacaatg gctcgcaaga tcgtcgttgc agccatcgcc gtttcacctga ccacgggtctc      60
117 gattacggcc agcgcttcgg cagacccttc caaggactcg aaggcccagg tctcggccgc      120
119 cgaggccggc atcacgggca cctggtacaa ccagctcggc tcgaccttca tcgtgaccgc      180
121 gggcgccgac ggcgccttga ccggaacctc cgagtcggcc gtcggcaacg ccgagagccg      240
123 ctacgtcctg accggtcgtt acgacagcgc cccggccacc gacggcagcg gcaccgccct      300
125 cggttggacg gtggcctgga agaataacta ccgcaacgcc cactccgcga ccacgtggag      360
127 cggccagtac gtcggcgggc ccgaggcgag gatcaacacc cagtggctgc tgacctccgg      420
129 caccaccgag gccaacgcct ggaagtccac gctggtcggc cagcacacct tcaccaaggt      480
131 gaagccgtcc gccgcctcca tcgacgcggc gaagaaggcc ggcgtcaaca acggcaaccc      540
133 gctcgacgcc gttcagcagt agtc
136 <210> SEQ ID NO: 4
137 <211> LENGTH: 184
138 <212> TYPE: PRT
139 <213> ORGANISM: Artificial sequence
141 <220> FEATURE:
142 <223> OTHER INFORMATION: 'mst'-streptavidin artificial gene product ✓
144 <400> SEQUENCE: 4
146 Met Ala Arg Lys Ile Val Val Ala Ala Ile Ala Val Ser Leu Thr Thr
147 1      5      10      15
150 Val Ser Ile Thr Ala Ser Ala Ser Ala Asp Pro Ser Lys Asp Ser Lys
151      20      25      30
154 Ala Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn
155      35      40      45
158 Gln Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala Asp Gly Ala Leu
159      50      55      60
162 Thr Gly Thr Tyr Glu Ser Ala Val Gly Asn Ala Glu Ser Arg Tyr Val
163 65      70      75      80
166 Leu Thr Gly Arg Tyr Asp Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr
167      85      90      95
170 Ala Leu Gly Trp Thr Val Ala Trp Lys Asn Asn Tyr Arg Asn Ala His
171      100      105      110
174 Ser Ala Thr Thr Trp Ser Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/762,243

DATE: 09/05/2001

TIME: 13:13:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\09052001\I762243.raw

```

175          115          120          125
178 Ile Asn Thr Gln Trp Leu Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala
179          130          135          140
182 Trp Lys Ser Thr Leu Val Gly His Asp Thr Phe Thr Lys Val Lys Pro
183 145          150          155          160
186 Ser Ala Ala Ser Ile Asp Ala Ala Lys Lys Ala Gly Val Asn Asn Gly
187          165          170          175
190 Asn Pro Leu Asp Ala Val Gln Gln
191          180
194 <210> SEQ ID NO: 5
195 <211> LENGTH: 492
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: 'prost'- streptavidin artificial gene
202 <400> SEQUENCE: 5
203 gactgcagtt gaccctcca aggactcgaa ggcccagggtc tcggccgccg aggccggcat      60
205 caccggcacc tggatcaacc agctcggctc gacctcatc gtgaccgagg gcgcccagcg      120
207 cgccctgacc ggaacctacg agtcggcgt cggcaacgcc gagagccgt acgtcctgac      180
209 cggtcgttac gacagcgccc cgccaccga cggcagcggc accgcccctcg gttggacggt      240
211 ggctggaag aataactacc gcaacgcca ctccgcgacc acgtggagcg gccagtacgt      300
213 cggcggcgcc gaggcgagga tcaacacca gtggctgctg acctccggca ccaccgaggc      360
215 caacgcctgg aagtccacgc tggtcggcca cgacaccttc accaaggtga agccgtccgc      420
217 cgctccatc gacgcggcga agaaggccgg cgtcaacaac ggcaaccgcg tcgacgcggt      480
219 tcagcagtag tc
222 <210> SEQ ID NO: 6
223 <211> LENGTH: 162
224 <212> TYPE: PRT
225 <213> ORGANISM: Artificial sequence
227 <220> FEATURE:
228 <223> OTHER INFORMATION: 'prost'- streptavidin artificial gene product
230 <400> SEQUENCE: 6
232 Thr Ala Val Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala
233 1          5          10          15
236 Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
237          20          25          30
240 Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
241          35          40          45
244 Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
245          50          55          60
248 Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
249 65          70          75          80
252 Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
253          85          90          95
256 Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
257          100          105          110
260 Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
261          115          120          125
264 Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp

```

RAW SEQUENCE LISTING

DATE: 09/05/2001

PATENT APPLICATION: US/09/762,243

TIME: 13:13:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\09052001\I762243.raw

```

265      130      135      140
268 Ala Ala Lys Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val
269 145      150      155      160
272 Gln Gln
276 <210> SEQ ID NO: 7
277 <211> LENGTH: 495
278 <212> TYPE: DNA
279 <213> ORGANISM: Artificial sequence
281 <220> FEATURE:
282 <223> OTHER INFORMATION: 'mprost'- streptavidin artificial gene ✓
284 <400> SEQUENCE: 7
285 gtaaacaatg gctgaccctt ccaaggactc gaaggcccag gtctcgcccg ccgaggcccg 60
287 catcacccgc acctggtaca accagctcgg ctgcaccttc atcgtgaccg cgggcgccga 120
289 cggcgccctg accggaacct acgagtcggc cgctcggaac gccgagagcc gctacgtcct 180
291 gaccggtcgt tacgacagcg ccccgccac cgacggcagc ggacccgcc tgggttgac 240
293 ggtggcctgg aagaataact accgcaacgc ccactccgcg accacgtgga gcggccagta 300
295 cgctcgccgc gccgaggcga ggatcaacac ccagtggctg ctgacctccg gcaccaccga 360
297 ggccaacgcc tggaaagcca cgctggtcgg ccacgacacc ttcaccaagg tgaagccgctc 420
299 cgccgcctcc atcgacgagg cgaagaaggc cggcgtaaac aacggcaacc cgctcgacgc 480
301 cggtcagcag tagtc 495
304 <210> SEQ ID NO: 8
305 <211> LENGTH: 161
306 <212> TYPE: PRT
307 <213> ORGANISM: Artificial sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: 'mprost'- streptavidin artificial gene product ✓
312 <400> SEQUENCE: 8
314 Met Ala Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu
315 1      5      10      15
318 Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile
319      20      25      30
322 Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser Ala
323      35      40      45
326 Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser
327      50      55      60
330 Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala
331      65      70      75      80
334 Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly
335      85      90      95
338 Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu
339      100      105      110
342 Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly
343      115      120      125
346 His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala
347      130      135      140
350 Ala Lys Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val Gln
351      145      150      155      160
354 Gln
358 <210> SEQ ID NO: 9

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/762,243

DATE: 09/05/2001

TIME: 13:13:45

Input Set : A:\ES.txt

Output Set : N:\CRF3\09052001\I762243.raw

```

359 <211> LENGTH: 369
360 <212> TYPE: DNA
361 <213> ORGANISM: Artificial sequence
363 <220> FEATURE:
364 <223> OTHER INFORMATION: 'cst'- streptavidin artificial gene ✓
366 <400> SEQUENCE: 9
367 actgcaggca tcaccggcac ctggtacaac cagctcggct cgaccttcat cgtgaccgcg      60
369 ggcgccgacg ggcacctgac cggaacctac gagtcggccg tcggcaacgc cgagagccgc      120
371 tacgtcctga ccggtcggtta cgacagcgcc ccggccaccg acggcagcgg caccgccttc      180
373 ggttggacgg tggcctggaa gaataactac cgcaacgccc actccgcgac cacgtggagc      240
375 ggccagtacg tcggcgcgcc cgaggcgagg atcaacaccc agtggctgct gacctccggc      300
377 accaccgagg ccaacgcctg gaagtccacg ctggtcggcc acgacacctt caccaaggtg      360
379 aagccgtag
382 <210> SEQ ID NO: 10
383 <211> LENGTH: 122
384 <212> TYPE: PRT
385 <213> ORGANISM: Artificial sequence
387 <220> FEATURE:
388 <223> OTHER INFORMATION: 'cst'- streptavidin artificial gene product ✓
390 <400> SEQUENCE: 10
392 Thr Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
393 1 5 10 15
396 Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
397 20 25 30
400 Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
401 35 40 45
404 Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
405 50 55 60
408 Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
409 65 70 75 80
412 Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
413 85 90 95
416 Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
417 100 105 110
420 Gly His Asp Thr Phe Thr Lys Val Lys Pro
421 115 120
424 <210> SEQ ID NO: 11
425 <211> LENGTH: 376
426 <212> TYPE: DNA
427 <213> ORGANISM: Artificial sequence
429 <220> FEATURE:
430 <223> OTHER INFORMATION: 'cyto' - streptavidin artificial gene ✓
432 <400> SEQUENCE: 11
433 gtaaacaaatg gctggcatca ccggcacctg gtacaaccag ctcggtcga ccttcacgt      60
435 gaccgcgggc gccgacggcg cctgaccgg aacctacgag tcggccgtcg gcaacgccga      120
437 gagccgctac gtctgaccg gtcgttacga cagcgccccg gccaccgacg gcagcggcac      180
439 cgccctcggt tggacggtgg cctggaagaa taactaccgc aacgcccact ccgcgaccac      240
441 gtggagcggc cagtacgtcg gcggcgccga ggcgaggatc aacacccagt ggctgctgac      300
443 ctccggcacc accgaggcca acgctggaa gtccacgctg gtcggccacg acaccttcac      360

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/762,243

DATE: 09/05/2001

TIME: 13:13:46

Input Set : A:\ES.txt

Output Set: N:\CRF3\09052001\I762243.raw

US/09/762,243